L14 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1985:407162 BIOSIS
DN BA80:77154
TI DERIVATION AND DIVERSIFICATION OF MONOCLONAL ANTIBODIES.
AU KOEHLER G
CS MAX PLANCK INST. IMMUNOBIOL., 487, GRENZACHERSTRASSE, 4058 BASEL, SWITZERLAND.
SO EMBO (EUR MOL BIOL ORGAN) J, (1985) 4 (6), 1359-1366.
CODEN: EMJODG. ISSN: 0261-4189.
FS BA; OLD
LA English
AB A 1984 Nobel Lecture given by G. Koehler on the subject of monoclonal antibodies is presented. The topics discussed include lymphocyte fusion, diversification of monoclonal antibodies, **Ig** chain loss variants and the H chain toxicity hypothesis, **antibody arrays** and secondary fusion, diversification by mutant selection, diverisification by reverse genetics, the transgenic mouse model, expression of trans-**Ig**, and the influence of transgenic .mu. and K chains on allelic exclusion.
CC Genetics and Cytogenetics - Animal *03506
Biochemical Studies - Proteins, Peptides and Amino Acids *10064
Biochemical Studies - Carbohydrates *10068
Biophysics - Molecular Properties and Macromolecules *10506
Immunology and Immunochemistry - General; Methods *34502
Immunology and Immunochemistry - Immunopathology, Tissue Immunology *34508
BC Muridae 86375
IT Miscellaneous Descriptors
MOUSE MODEL LYMPHOCYTE FUSION MONOCLONAL ANTIBODY IMMUNOGLOBULIN CHAIN LOSS VARIANT HEAVY CHAIN TOXICITY HYPOTHESIS **ANTIBODY ARRAY** SECONDARY FUSION MUTANT SELECTION REVERSE GENETICS ALLELIC EXCLUSION NOBEL LECTURE

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04/03/03

33 ANSWER 38 OF 43 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 95252204 EMBASE
DN 1995252204
TI **Immunoglobulin** gene usage in the human anti-pathogen response.
AU Newkirk M.M.; Rioux J.D.
CS Montreal General Hospital Res. Inst., 1650 Cedar Avenue,Montreal, Que. H3G 1A4, Canada
SO Infectious Agents and Disease, (1995) 4/3 (153-160).
ISSN: 1056-2044 CODEN: IADIEV
CY United States
DT Journal; (Short Survey)
FS 004 Microbiology
022 Human Genetics
026 Immunology, Serology and Transplantation
LA English
SL English
AB The human **antibody** response to foreign pathogens is generated to a relatively small number of target surface proteins and carbohydrates that nonetheless have an extensive **array** of epitopes. The study of human monoclonal **antibodies** to different pathogens shows that there are a diversity of mechanisms used to generate a sufficient repertoire of **antibodies** to combat the invading pathogens. Although many different **immunoglobulin** gene elements are used to construct the anti-pathogen response, some elements are used more often than would be expected if all elements were used randomly. For example, the immune response to Haemophilus influenzae polysaccharide appears to be quite narrow, being restricted primarily to a specific heavy- chain gene, 3-15, and a .lambda. light-chain family II member, 4A. In contrast, for the immune response to cytomegalovirus proteins, a wider group of gene elements is needed. It is also surprising that despite an investigator bias for IgG- rather than IgM-secreting immortal B **cells** (because of their high **affinity** and neutralizing abilities), 26% of light chains and 13% of heavy chains showed a very low level of somatic mutation, equivalent to an IgM molecule that has not undergone **affinity** maturation. Although some highly mutated IgG molecules are present in the anti-pathogen response, most of the monoclonal **antibodies** specific for viruses or bacteria have a level of somatic hypermutation similar to that of the adult IgM repertoire. A number of studies have shown that there are similarities in the **antibody** responses to pathogens and to self (autoantibodies). The similarities suggest that there are common building blocks that, depending on the precise configuration of the final product, can result in an anti-bacterial **antibody**, an anti- viral **antibody**, or an autoantibody.
CT Medical Descriptors:
*autoimmunity
*immune response
***immunoglobulin gene**
antibody response
b lymphocyte
haemophilus influenzae
human
priority journal
short survey
somatic mutation
etiology
Drug Descriptors:
*autoantibody: EC, endogenous compound
***bacterium antibody**
***immunoglobulin antibody: EC, endogenous compound**
***virus antibody**
bacterial polysaccharide
epitope
immunoglobulin g: EC, endogenous compound

immunoglobulin heavy chain: EC, endogenous compound
immunoglobulin light chain: EC, endogenous compound
immunoglobulin m: EC, endogenous compound
monoclonal antibody

RN (**immunoglobulin** g) 97794-27-9; (**immunoglobulin** m) 9007-85-6

L9 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 10
AN 1976:573621 CAPLUS
DN 85:173621
TI Centrifugal system for **affinity** chromatography with eluate monitoring
AU Shumate, S. E., II; Scott, Charles D.
CS Oak Ridge Natl. Lab., Oak Ridge, TN, USA
SO Clinical Chemistry (Washington, DC, United States) (1976), 22(9), 1493-6
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English
CC 9-2 (Biochemical Methods)
Section cross-reference(s): 15
AB A prototype centrigual system was developed that permits parallel photometric monitoring of eluate streams from a radial **array** of chromatog. columns. The modular rotor design consists of a discoidal center insert for eluent and sample apportionment, the chromatog. columns, and flow-through cuvettes, all of which are mounted on an Al base plate. A common sample is introduced simultaneously to each column; a single eluent stream is used for all columns. The goal is to assay simultaneously for 8-16 serum **proteins** sepd. by **affinity** chromatog. from a single sample. The system is here exemplified by the use of immunosorbents (consisting of **antibodies** to human immunoglobulins covalently bound to alumina particles) to allow simultaneous detns. of **IgG** and **IgM** from a single human serum sample in less than 16 min.
ST **affinity** chromatog centrifugal analyzer; immunoglobulin detn serum **affinity** chromatog
IT Globulins, immune
RL: ANST (Analytical study)
(G and M, simultaneous detn. of)
IT Chromatography, column and liquid
(**affinity**, centrifugal analyzer for)

9 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2003 ACS
AN 1994:555738 CAPLUS
DN 121:155738
TI Ligand-binding **antibody** analogs for use in therapeutics and diagnostics
IN Hudson, Peter John; Lah, Maria; Kortt, Alex Andrew; Irving, Robert Alexander; Atwell, John Leslie; Malby, Robyn Louise; Power, Barbara Elaine; Colman, Peter Malcolm
PA Commonwealth Scientific and Industrial Research Organisation, Australia
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07K015-12
ICS C12P021-08; C12N015-10; C12N015-11; C12N015-12; C12N015-13
CC 15-2 (Immunochemistry)
Section cross-reference(s): 9
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9407921	A1	19940414	WO 1993-AU491	19930924
	W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 667834	A1	19950823	EP 1993-920608	19930921
	EP 667834	B1	20000628		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	AT 194130	E	20000715	AT 1993-920608	19930921
	ES 2150448	T3	20001201	ES 1993-920608	19930921
	EP 672068	A1	19950920	EP 1993-921744	19930924
	R: CH, DE, FR, GB, IT, LI				
	JP 08504320	T2	19960514	JP 1993-508515	19930924
	AU 689079	B2	19980326	AU 1993-51034	19930924
	AU 9351034	A1	19940426		
	US 5645697	A	19970708	US 1995-406866	19950323
	US 5844094	A	19981201	US 1995-403853	19950530
PRAI	AU 1992-4973	A	19920925		
	AU 1992-49	A	19920925		
	AU 1992-4932	A	19920925		
	WO 1993-AU482	W	19930921		
	WO 1993-AU491	W	19930924		

AB Polypeptides binding a specific target have a stable core polypeptide region (SCR) and one or more target-binding regions (TBR) and may be prepd. using a maturation step to modify the specificity, the **affinity** or the avidity of binding to the target. The polypeptides may self assoc. to form stable dimers, aggregates or **arrays**. These polypeptides may be of use in diagnostics, therapeutics, prognosis or prophylaxis. The **protein** may be based on **Igs** or **Ig**-like mols. such as CD8 antigens. Genes for single chain scFv **antibodies** to glycophorin were constructed by std. methods using the phagemid display vector pHFA and the constructs propagated in a mutD strain of Escherichia coli followed by screening for binding of glycophorin. Mols. with altered **affinity** for glycophorin were obtained.
ST **Ig** CD8 target binding deriv
IT Mutation
(in vivo, in host expressing mutator gene, expression of genes for single chain **antibodies** or CD8 antigens in, prepn. of analogs with altered ligand **affinity** in relation to)
IT Neoplasm
(markers of, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of

genes in mutator host in relation to)

IT Deoxyribonucleic acid sequences
(of genes for single chain **Igs** and CD8 antigens of human and mouse)

IT **Protein** sequences
(of single chain **Igs** and CD8 antigens of human and mouse)

IT **Antibodies**
Glycophorins
RL: PREP (Preparation)
(single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Immunoglobulins
RL: PREP (Preparation)
(single-chain, aggregate forming, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Erythrocyte
(surface **proteins** of, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Antigens
RL: PREP (Preparation)
(viral, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Antigens
RL: PREP (Preparation)
(CD8, single-chain, aggregate forming, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT **Proteins**, specific or class
RL: PREP (Preparation)
(cell surface-assocd., single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Gene
RL: BIOL (Biological study)
(chimeric, for single chain **antibodies** or CD8 antigens, expression in prokaryotic or eukaryotic microorganisms of)

IT Virus, animal
(influenza, neuraminidase of, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Lymphokines and Cytokines
RL: PREP (Preparation)
(leukemia-inhibiting factor, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT Gene, microbial
RL: PREP (Preparation)
(mutD, Escherichia coli expressing, expression of genes for single chain **antibodies** or CD8 antigens in, prepn. of analogs with altered ligand **affinity** in relation to)

IT Gene, microbial
RL: PREP (Preparation)
(mutator, host expressing, expression of genes for single chain **antibodies** or CD8 antigens in, prepn. of analogs with altered ligand **affinity** in relation to)

IT Genetic vectors
(phagemid, pHFA, display vector for surface presentation of single chain **antibodies** or CD8 antigens in Escherichia coli, mutator host for prepn. of analogs with altered **affinity** in relation to)

IT Animal growth regulators
RL: PREP (Preparation)

(.alpha.-transforming growth factors, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT 150166-72-6 157213-22-4, Histocompatability antigen a3 H-2K domain (mouse clone pPOWpelBMsc-EcoRI) 157213-24-6 157710-84-4
RL: PRP (Properties)
(amino acid sequence of)

IT 157213-18-8P, CD8 antigen Ly-2+Ly-3 V domains linked MscI-SalI with FLAG tail (mouse clone JLApelB) 157213-20-2P, CD8 single chain antigen (pelB CD8a and CD8b V dom) (human)
RL: SPN (Synthetic preparation); PREP (Preparation)
(amino acid sequence of and prepn. of, prepn. of analogs with altered ligand **affinity** in relation to)

IT 157213-26-8
RL: PRP (Properties)
(amino acid sequence of, in single chain Cd8 antigens)

IT 9001-67-6P, Neuraminidase
RL: PREP (Preparation)
(influenza virus, single chain **Ig** or CD8 derivs. binding to, prepn. of, alteration of target **affinity** by expression of genes in mutator host in relation to)

IT 157213-17-7P, DNA (mouse clone JLApelB Ly-2+Ly-3 V domains linked MscI-SalI with FLAG tail) 157213-19-9P, DNA (human single chain CD8 antigen (pelB CD8a and CD8b V dom)
RL: SPN (Synthetic preparation); PREP (Preparation)
(nucleotide sequence and prepn. of, prepn. of analogs with altered ligand **affinity** in relation to)

IT 149616-92-2, DNA (human anti-influenza NC10 single chain scFv **antibody** gene and flanks) 157213-21-3, DNA (mouse clone pPOWpelBMsc-EcoRI histocompatability antigen a3 H-2K domain) 157213-23-5 157213-25-7
RL: PRP (Properties)
(nucleotide sequence of)

L9 ANSWER 19 OF 31 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.DUPLICATE 5
AN 95252204 EMBASE
DN 1995252204
TI Immunoglobulin gene usage in the human anti-pathogen response.
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CS Montreal General Hospital Res. Inst., 1650 Cedar Avenue,Montreal, Que. H3G 1A4, Canada
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***bacterium antibody**
***immunoglobulin antibody: EC, endogenous compound**
***virus antibody**
bacterial polysaccharide
epitope
immunoglobulin g: EC, endogenous compound

immunoglobulin heavy chain: EC, endogenous compound
immunoglobulin light chain: EC, endogenous compound
immunoglobulin m: EC, endogenous compound
monoclonal antibody

RN (immunoglobulin g) 97794-27-9; (immunoglobulin m) 9007-85-6